

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of using a treatment fluid in a subterranean formation comprising introducing a treatment fluid having a density that varies as a function of pressure into a subterranean formation, wherein the treatment fluid comprises a base fluid and a portion of variable pressure weighting material particles.
2. (Original) The method of claim 1 wherein the treatment fluid is used as a well fluid.
3. (Original) The method of claim 2 wherein the well fluid is selected from the group consisting of drilling fluids, completion fluids, and stimulation fluids.
4. (Original) The method of claim 2 wherein the well fluid is selected from the group consisting of drilling muds, well cleanup fluids, workover fluids, spacer fluids, gravel pack fluids, acidizing fluids, and fracturing fluids.
5. (Original) The method of claim 4 further comprising the step of drilling, completing and/or stimulating a subterranean formation using the treatment fluid.
6. (Original) The method of claim 5 further comprising the step of producing a fluid from the subterranean formation.
7. (Original) The method of claim 6 wherein the fluid comprises oil, gas, or a mixture thereof.
8. (Original) The method of claim 1 wherein the treatment fluid has a density at sea level in the range of from about 6 lb/gallon to about 18 lb/gallon.
9. (Original) The method of claim 1 wherein the base fluid is oil, water, or a mixture thereof.
10. (Original) The method of claim 1 wherein the base fluid is present in the treatment fluid in an amount in the range of from about 60% to about 99.99% by volume.
11. (Original) The method of claim 1 wherein the portion of variable pressure weighting material particles is present in the treatment fluid in an amount in the range of from about 0.01% to about 40% by volume of the treatment fluid.

12. (Original) The method of claim 1 wherein the variable pressure weighting material particles have a specific gravity in the range of from about 0.1 to about 0.5.

13. (Original) The method of claim 1 wherein the variable pressure weighting material particle further comprises a compressible fluid.

14. (Original) The method of claim 13 wherein the compressible fluid comprises air, propane, ammonia, fluorinated hydrocarbon refrigerants, nitrogen, carbon dioxide, argon or a mixture thereof.

15. (Original) The method of claim 1 wherein a portion of the variable pressure weighting material particles can withstand a pressure of up to about 21,000 psi without crushing.

16. (Original) The method of claim 15 wherein a portion of the variable pressure weighting material particles can rebound to about their original size and shape when pressure is removed.

17. (Original) The method of claim 1 wherein a portion of the variable pressure weighting material particles can withstand temperatures up to about 500°F without degrading.

18. (Original) The method of claim 1 wherein the subterranean formation comprises a borehole, and wherein the density of the treatment fluid increases as the pressure in the bore hole increases.

19. (Original) The method of claim 18 wherein the density of the treatment fluid in the bore hole is in the range of from about 0.01% to about 300% higher than its density at sea level.

20. (Original) The method of claim 1 wherein the subterranean formation is located beneath the ocean floor.

21. (Original) The method of claim 20 wherein the density of the treatment fluid decreases as the treatment fluid travels from the ocean floor to sea level.

22. (Original) The method of claim 1 wherein the treatment fluid further comprises a salt, a fluid loss additive, a shale swelling inhibitor, an emulsifier, a viscosifier, caustic, or a fixed-density weighting agent.

23. (Original) The method of claim 1 wherein the variable pressure weighting material particle comprises a material selected from the group consisting of: a plastic, an elastomer, and a metal.

24. (Original) The method of claim 23 wherein the metal is a memory metal.

25. (Original) The method of claim 18 wherein the density of the treatment fluid in the borehole is sufficient to prevent kicks without fracturing a region of the subterranean formation adjacent to the borehole.

26-64 (Cancelled).